

NAME:

ID:

## ITCE444

(QUIZ 3) 15 May 2016

Using TIMER0, design a square wave generator at frequency of 0.1 Hz.

TMR0ON	T08BIT	T0CS	T0SE	PSA	T0PS2	T0PS1	T0PS0
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TMR0ON	D7	Timer0 ON and OFF control bit 1 = Enable (start) Timer0 0 = Stop Timer0					
T08BIT	D6	Timer0 8-bit/16-bit selector bit 1 = Timer0 is configured as an 8-bit timer/counter. 0 = Timer0 is configured as a 16-bit timer/counter.					
T0CS	D5	Timer0 clock source select bit 1 = External clock from RA4/T0CKI pin 0 = Internal clock (Fosc/4 from XTAL oscillator)					
T0SE	D4	Timer0 source edge select bit 1 = Increment on H-to-L transition on T0CKI pin 0 = Increment on L-to-H transition on T0CKI pin					
PSA	D3	Timer0 prescaler assignment bit 1 = Timer0 clock input bypasses prescaler. 0 = Timer0 clock input comes from prescaler output.					
T0PS2:T0PS0	D2D1D0	Timer0 prescaler selector					
	0 0 0	= 1:2 Prescale value (Fosc / 4 / 2)					
	0 0 1	= 1:4 Prescale value (Fosc / 4 / 4)					
	0 1 0	= 1:8 Prescale value (Fosc / 4 / 8)					
	0 1 1	= 1:16 Prescale value (Fosc / 4 / 16)					
	1 0 0	= 1:32 Prescale value (Fosc / 4 / 32)					
	1 0 1	= 1:64 Prescale value (Fosc / 4 / 64)					
	1 1 0	= 1:128 Prescale value (Fosc / 4 / 128)					
	1 1 1	= 1:256 Prescale value (Fosc / 4 / 256)					